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SCHOOL AND SOCIETY

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SCHOOL AND SOCIETY

Volume XXI SATURDAY, JANUARY 31, 1925 Number 527

UNIFYING THE AIMS OF HIGH SCHOOL SCIENCE TEACHING[1]

THE hopes aroused fifty or sixty years ago by the contemplation of great human advances to be attained by the general teaching of science have not been realized. Science has not fitted closely into the purposes of education; education has not fully promoted the spread or the purposes of science. There have been wonderful advances in the growth of knowledge and in practical applications; the air is full of these. But the results have not come up to expectations: particularly has science teaching failed to meet expectation, either as education or as a means of spreading science. And most of the reasons offered for past failures by critics of education are not very convincing.

Since science is preeminently an analytical process, it may be in order for teachers of science to ask themselves what the trouble is. A helpful suggestion is found in the introductory chapter which Mr. Edward L. Youmans wrote nearly sixty years ago for a collection of essays and addresses by various scientists, published under the title "The Culture Demanded by Modern Life" (1867, Appleton):

> Through varied experiences [man] is slowly civilized, and there is a growth of knowledge with the course of ages. But while thought is ever advancing, it is the nature of institutions to fix the mental states of particular times; and there hence arises a tendency to conflict between growing ideas and the external arrangements which are designed to express and embody them.

It is in the nature of institutions to stand; it is in the nature of life to move, to change. We have here one of those eternal conflicts that emerge from the nature of things, but that we so easily overlook until our neglect brings pain or disaster. Life encounters new situations. Thought solves problems. The spirit of man expands. Then we try to build a stately mansion for the soul, as of a given date. The mansion must then strangle the soul and become a mausoleum, or the soul must burst its restraints and ruin the stately mansion. Either outcome brings mourning or the gnashing of teeth. But we have to make up our minds that we can not save both, and we have to decide which to sacrifice.

From a somewhat different angle Emerson generalizes more tersely and more strikingly. In his essay on "Intellect" he says, "God offers to every mind its choice between truth and repose. Take which you please, you can never have both." It seems to me that as educators, being ourselves somewhat educated and therefore somewhat appreciative of both stately mansions and soulful inhabitants, we have attempted the impossible. We have tried to insure both the comfort of repose and the truth of continuous readjustment, rediscovery. We have sought both change and permanency in terms that are inherently incompatible. We have in the school an institution designed to preserve and transmit what is best in all time. We have in science an instrument for restating truth, for changing opinions, for breaking up prejudices, for challenging convictions. There is in fact a conflict of purposes not only between institutions in general and the spirit of science, but between the school itself and the spirit of truth-seeking.

This conflict is well illustrated by the persistence in school of both aims and

[1] Read before the 1924 annual meeting of the New Jersey State Science Teachers Association at Newark.

methods, of both materials of instruction and mode of organization, in utter disharmony with present thought and prevailing conditions. Forty years ago those who studied psychology under William James were taught to replace the ancient faculty hypothesis of the human mind with a more functional interpretation in accord with newly acquired knowledge. And there is hardly a psychologist or educator of standing to uphold the faculty psychology today. Yet the bulk of schoolroom practice continues along the traditional lines of drill and training. In the high schools especially will you find teachers solemnly telling pupils or parents of the importance of this or that procedure "to train the memory" or some other "faculty."

Much of the school material, especially in that part of the high school business which has to do with "culture," or with "the worthy use of leisure," is derived from a state of society and mode of life that prevailed when the masses of men and women were illiterate and inarticulate, when leisure was the privilege of the wealthy and noble, and when culture was precisely the distinctive and exclusive manner and conversation and badinage of ladies and gentlemen of leisure and irresponsibility. As Spencer, in effect, pointed out long ago, a gentleman would be embarrassed if he were trapped in an error regarding the authorship of some classic or the date of a medieval scandal; but he could with propriety plead ignorance of any scientific developments and become the victim of some quack medicine or of some absurd scheme to make something out of nothing with a view to profit.

After a generation of wonderful growth of insight into the human spirit, we continue to uphold in practice the infantile notion that rivalry is an adequate—indeed, the chief—incentive for those grades of human activity which higher education is ostensibly designed to encourage. After a century of unparalleled growth in human knowledge we still teach boys and girls in such a manner that they are ashamed to say "I don't know," when everybody who knows anything—and that should include teachers of science—knows that it is both impossible and unnecessary for every educated person to know everything.

In our school organization also we have institutionalized a form of relationship between pupil and teachers, between teacher and teacher, between teacher and administration, that is quite incompatible with prevailing ideas of democratic values and objectives. It is true that here and there pupils are coming into their own, acquiring somehow a degree of self-government and of experience in responsibility; but teachers for the most part remain in the status of apprentice and dependent that no self-respecting journeyman in some semi-skilled trade would tolerate for a week.

One could multiply instances of the institutional lag of school behind the best thought and practice of the day. But the point should be sufficiently clear that we have here a very elaborate, a very costly and in a way a very efficient institution, but one that is an obstacle to human life and welfare almost in proportion to its thoroughness and elaborateness and efficiency. And so far as concerns science teaching specifically, the same is almost generally true.

Perhaps we can see this better if we consider a concrete instance. A well-known educator in a large city where he has served long and faithfully through all the ranks of the profession had occasion a few years ago to look into a chemistry classroom in one of the largest high schools. The teacher had been demonstrating the electrolysis of water and was making applications by reference to the industrial uses of hydrogen and to the electrolytic method of producing hydrogen. Our superintendent was interested; he had studied chemistry when he

was in college, more than forty years previously. Both as a student of the subject and as a "higher officer" in the school system, he could speak up with authority; he politely begged to correct the teacher. It is impossible, he said, to produce hydrogen commercially by the electrolytic method; this he knew, for he remembered that his college professor of chemistry had made a special point of that—the cost of electric current was prohibitive! The teacher did not argue with him; he merely stated, in a tone of voice suitable for the occasion, that he was quite sure that he had read of electrolytically produced hydrogen being marketed. It happened that on the very day that the superintendent told me how he had caught a presumably competent teacher in such a glaring error, I had visited a plant that was producing commercial hydrogen electrolytically, and the superintendent shook his head as one should say, "Isn't nature wonderful?" but there was no need for him to apologize either to the teacher whom he had "corrected" nor to the pupils. The point to notice here, however, is that this educated gentleman was bound to be out of touch with the times in which he lived almost in exact proportion to the thoroughness with which his high school or college teachers had impressed him with what they knew. The better he knew what he knew the less likely was he to discover his ignorance.

In view of the rapid changes that have taken place in the body of scientific fact and scientific theory, as well as in the whole scheme and machinery of living, I was constantly tempted to say to teachers whom I have watched at work, "Half of what you learned at college is no longer true; and half of the rest no longer matters." The exact fractions would of course depend upon the age of the teacher, but the principle is true for all of us, even the recent graduate; and yet, as teachers, what do most of us do most of the time? We teach almost entirely the residual remembrances of what we learned at college. And the process is continuous.

It is true of course that the resourceful science teacher not only keeps in touch with current development, but modifies methods and adapts materials in accordance with current interests, new discoveries, local conditions. He devises new demonstrations and sometimes new jokes. But the more thoroughly he prepares his lessons, the more skilfully he demonstrates the ideas he wishes to teach, the more thoroughly he drills his pupils, the more likely is he to fix his teachings as rigid, unchangeable doctrine, to encumber his pupils in their subsequent struggles with new ideas, or merely to ornament them with antiques where they have nothing to do with ideas. In other words, the spirit of the school, in so far as it is accepted and promulgated by the teacher of science, converts science teaching merely into one of several lines of indoctrination. Our grandparents did not need to know anything about the theory of solutions or about endocrines; but conscientious young mothers who a few years ago learned what they learned, are to-day anxiously asking whether calories are really of no account in diet, now that vitamins have been found to be so important.

As thought is advancing, as the search for truth opens up new worlds, the institution fixes the mental state of its own time. You will impress your pupils with the damage done by the corn-borer, and long after the corn-borer has been exterminated some of them will remember the corn-borer as the most important agricultural problem of the state. And there are no doubt a few of the old boys left who remember the neat mathematical demonstration that was used to prove the fallacy of Langley's heavier-than-air flying projects. The better the teaching, the more permanent the impression, the more difficult its replacement by new experiences, new ideas.

We must seriously ask ourselves whether as teachers we are not establishing the same kinds of obstacles to human development, to spiritual progress, as are the merchants in dogma who happen to carry somewhat different styles.

II

There is another aspect of high school science that calls for serious consideration. This is related to the process of progressive specialization. It is in the nature of science to be analytical; it takes apart the world that it contemplates. The progress of science is, from one aspect, a progressive refinement of units. From the three or four "elements" of the ancients to the atoms of yesterday and the electrons of today and the nobody-knows-what ultimate units of to-morrow, there is illustrated this progressive sundering of man's environment and of his problems. Another aspect of this characteristic of science is seen in the progressive specialization, from the natural philosophy of Aristotle to the classifications of Comte and Spencer, to the dozens of branches of physics and chemistry and biology that confuse the students and irritate the trustees of every college; there is a progressive refinement of the field of contemplation.

This process is characteristic of life itself, as we may see in the progressive division of labor, the differentiation of functions, the specialization of structure in organisms and in human affairs. Now this analytic procedure is both a tremendous aid to human progress and a serious obstacle to human education. It is a great aid because it makes possible the solution of problems which we could not otherwise approach; it is indeed of the very essence of problem-solving. But it is a serious obstacle to human education because the purpose of the latter is in general that of synthesizing, of integrating, or unifying various experience into a wholeness, that is, into the personality, the very life of each human being. And the two processes are in conflict; we are trying to pull in opposite directions.

The high-school student is completely surrounded by a number of specialists, each pulling in his own direction and all attempting to get the full attention of the pupil. Outside of the school, too, the adolescent is beset with countless impressions and suggestions; he feels himself driven from within as well as pushed and pulled from without; his greatest need is for a friend that will help him make order out of chaos. But the business of the specialist is quite the contrary; it is to emphasize his own specialty. This of course is not confined to science specialists; it is quite as true of the art teacher and the language teacher and the cooking teacher.

Moreover, the multiplication of science courses is likely to mean only the multiplication of distractions. The materials of physics, of chemistry and of biology have to be quite distinct to justify separate courses in the various departments; the specific aims are also quite distinct and are for the most part related directly to the nature of the material. They have quite properly to do with acquainting pupils with the facts of their environment—plant and animal forms that are important or significant in theoretical study, or interesting otherwise; the more common elements and the more startling elements; types of chemical reaction; fundamentals of mechanical relation; the use of quantitative method. But, instead of teaching science, our need to emphasize what is distinctive in our materials finds us teaching our materials, and the student is confused and bewildered with more distractions.

Obviously we can not teach everything; we must teach well what we do teach; we select what we believe to be significant, and we hope to accomplish most in this way, since all the other teachers are doing their respective shares. But this is an arithmeti-

cal concept of the maximum that is quite out of harmony with the nature of the organism we are trying to teach. The compartments in this receptacle are not altogether impervious; there may be both leakage and modification through interaction of dislocated elements. And at best we fail to meet the great need of unifying the experiences. We are teaching sciences or elements of the sciences, but never get around to teaching science, whatever that may be.

And this raises the question whether there is enough that is common to all the sciences of the school to warrant deliberate emphasis upon large principles of a relatively permanent value. We know that much of what we teach as to details of structure in type organisms or machinery, much of what we teach of distances and sizes of stars, or age and distribution of fossils, is forgotten; and we know also that such forgettings do not represent serious losses to the pupil. Moreover, we know that significant discoveries are constantly being made and made available to the reading public without carrying with them the manifestations of their significance, either in relation to what the pupils had previously learned in school or in relation to what men and women can do with them in the future. Our pupils forget the facts, and they never acquire principles; then what is left of science teaching? So long as we were content to train faculties, we did not have to insist that anything be remembered; the difficulty of the studies was in itself sufficient justification for teaching them; we trained memory by having pupils learn facts to be retained only until after the examination. It was learning that mattered, not the knowing. But now we can not hold this position; something has to carry over for future use, and the principles change as truly as do facts, albeit not so fast.

III

Now it seems to me that science has value in modern life in three different ways, and high school science can contribute to all of them. Most obvious is the application of science in the solution of problems. There is first of all the vast accumulation of facts, quantitative data, standards, constants and norms in every branch of human concern. Now we do not expect to transfer this to the pupils. He should perhaps familiarize himself with various samples, but not in the expectation that he will retain them for continuous use as applicable knowledge. After reciting and passing upon the vibrations per second of international tone A, the characteristic spectral lines of calcium, the differential diagnoses of the orders of insects and the atomic weights of the alkali metals and the halogens, he may with propriety forget these details. If he has been impressed with the romance and adventure of the various men from all times and lands who contributed to this knowledge, if he has been impressed with potential importance of accurate and verifiable knowledge, if he has been thrilled by the beauty of the mental performance that formulated the problems and discovered the solutions, if he has learned how to use a reference book so as to find the data in case he ever should need them, he has learned enough.

But accumulated knowledge is not all there is to the application of science. More important is the continuous solution of new problems, in industry, in agriculture, in medicine, in administration. Not all the students now in high school will enter occupations that continuously and systematically make use of research methods as part of their routine. Yet we may well consider whether science has not here something of value to every student, that is, the general method of dealing with problems. It is possible that we are generalizing here too broadly and that we are in danger of stealing in a new faculty to be trained. But

there is no question that in so far as the so-called method of science has been consistently applied, it has yielded valuable results in all fields, many remote from those in which the sciences had their development. The accumulation of facts, the refining and measuring of facts, the classifying and verifying of facts, and the subsequent generalizations, checks and confirmations have been fruitful in anthropology and commerce, as they had been in engineering and chemistry. Everybody in every occupation is constantly confronted with new problems large and small. We can not use the experimental method with all kinds of material; but can we not use the principle of verifying hypotheses universally; can we not acquire the experimental attitude? Here is one thing that all the sciences can teach; and if the pupils do indeed acquire an appreciation of the method, and some beginnings in actually applying it, science teaching will have justified itself, even if nothing else is retained.

Another value obtainable from science study is what may be called the esthetic. We never know what will be interesting, not to say absorbing, to a given child, until we have found out; and we find out by observing his reactions to the various kinds of materials, activities or situations that human beings do find interesting. To many people science has value because it is the most fascinating game in the whole world. Some of these people, if they have the chance, will play this game for the rest of life, often at considerable sacrifices of what other people consider more valuable. The boy or girl who becomes a research worker, perhaps a great contributor to human knowledge, must be conceived to be fascinated in the same way as is the poet or the painter or explorer. Such people find an absorbing game and pursue it to the limit. We must not delude ourselves, because of our admiration for such characters, into attributing to their motives anything supernatural or even superhuman; it is not at all unreasonable to consider such personalities in the same way as we do a child that is too absorbed in his play to attend to his meals or to ordinary civilities. If the results of such play turn out to be of interest or value to the rest of us, we praise the devotion of the scientist or artist; if it turns out to be futile and harmless, we tap our foreheads and look wise; if the game becomes a nuisance, we sequestrate the genius. But the point to emphasize is that science may be pursued by an individual here or there as the most precious thing in life; and it is our business so to present our material as to fire the imagination of the one potential scientist per hundred or per thousand who happens to come within the range of our voice. For many other children in every thousand science has an esthetic appeal as supplying an outlet for the interest in collection, or as furnishing beautiful materials to see or to handle, or as offering beautiful, admirable mental processes, ingenuity, resourcefulness. To admire, to wonder is satisfying; some will get the delightful thrill from a landscape; others from delicate adaptations in organisms; others from the periodic system or the theory of atomic structure.

To get these values in the second class it is necessary that the science teacher be still capable of admiration and wonder—not necessarily the sentimentalizing disposition that is expressed in grunts or exclamations, but a genuine appreciation of the many wonders in the materials, in the processes, in the relationships of the phenomena around us, and quite as much appreciation of the human factors involved in bringing these wonders to our notice. There is much wisdom no doubt in the classic adage *nil admirari;* but I suspect that one who is literally incapable of astonishment can not arouse much enthusiasm on the part of his pupils.

The third type of value inherent in science has to do with the effect of its teachings upon one's outlook. This comes apparently from reversing the characteristic analytic processes of science and applying a synthetic method. Science is often criticized by champions of other disciplines for its lack of permanency. The scientists of one generation repudiate the teachings of those of a previous generation. This must be very disconcerting to the layman and to those who have clung too firmly to what they had learned in their youth. In contrast with this situation, consider the confidence and comfort of those who have been brought up on the eternal verities, whatever they may be. Yet in every field of effort the competent specialist is constantly introducing disconcerting, even radical, innovations, while clinging fast to the obsolete notions of his youth, in fields outside his specialty. Perhaps, after all, one is radical where he is most expert.

The chief value we are here considering is that of unifying experience—a function commonly relegated to religion or to philosophy. And yet science has contributed no insignificant items to this vital need. Let us note first of all that the scientific conception of "law" is quite as majestic and helpful as the traditional and uncritical notion. Under the old conception, we use the term "law" in a sense strongly colored by our experience with statutes, and especially with statutes derived from absolute forms of government. We still find science text-books that speak of this or that law "governing" the fall of bodies or the rate of oxidation. For people who need that sort of thing, that sort of thing must be very helpful. But one of the greatest services that science teachers could render their fellow-citizens during the next twenty years would be, it seems to me, to divorce the public mind entirely from this antiquated and degrading notion of law. Strictly speaking, then, a law in a scientific sense does not govern, control, guide, coerce, intimidate, direct, manage, conduct, regulate, dictate, rule, command or dominate anything in the whole world. A law is a state of mind; it depends upon one or several persons having noticed or experienced certain uniformities in events. Water at the altitude and latitude of Newark freezes at a certain temperature; the sun rises in Hoboken and sets in South Orange; fever and ague are caught from bad air near swamps, at night; a falling body accelerates its speed; vertebrates originate as one-celled organisms, and so on. These uniformities, being states of mind, are subject to the errors that beset human beings. Sometimes we see things that are not so; sometimes we see what we like to see; sometimes we overlook what is obvious to others. For these reasons, scientific generalization or laws are subject to change with little or no notice.

But the value of a law may be proportional to its validity; and if it is only a state of mind, and perhaps a fluctuating one, how can we rely upon it? We can rely upon scientific law just to the extent that we understand what it means. If we assume it to be an eternal verity and make our plans accordingly, our enterprise may survive us; but what is to stop some crank of an investigator from making a thousand or so more measurements and exposing the fallacy of the law that we had been following? At one time we quarantine every infectious case and burn the bed clothes and furniture; at another time we think that is all a waste of energy. At one time we administer whiskey for a long series of morbid states; at another time, we at least question the suitability of whiskey for some states. At one time we have an epidemic of appendectomy; at another time, fashions having changed, we extract every pulpless tooth. Fashions have changed in medicine, in agricultural practice, in engineering practice—wherever we use science

we are constantly changing our practice. It is only fair to say, however, that some people never change their practice; whether in medicine or in agriculture, in education or in administration, they guide their lives by what they know to be eternally true. Now we can not quarrel with those who have the absolute truth; but we can ask that teachers of science teach such truth as they have—*and that truth is relative.*

The value to be derived from the teaching of this kind of relative truth, which is far from eternal, I conceive to lie in the direction of health. This may seem inconsistent after intimating that medical science is in violent flux; but I have in mind certain aspects of mental, and especially social, health. The scientific point of view, insofar as it does indeed affect conduct, ought to help by eliminating from our lives many inhibiting superstitions, many irrational fears, many degrading prejudices, many destructive hostilities. This does not mean that science can furnish the truth upon which all people can agree; but it does mean that a scientific attitude on the part of people who do not agree ought to be fruitful of much good; there would be mutual tolerance and a common desire to discover the basis of difference and methods for their reconciliation. So long as the teaching of the school establishes the prevailing assumption that truth is absolute, it is the duty of every conscientious person to be a bigot, and as you look about you, you can see that in this regard at least most of us are very conscientious.

Science teaching, if it is to develop on the part of our students this scientific point of view, will have to teach explicitly many principles of thought and life that are now either ignored or taken for granted. For example, the distinction between facts and conclusions is one of fundamental importance to clear thinking about anything; most educated people never discover that this distinction needs to be made. Many men and women, having graduated from high school, with courses in required science, discover this distinction when they enter upon the study of law; others only when they get mixed up with lawyers as witnesses of a street accident. Again, there is the distinction between fact and hypothesis, and that between a casually observed fact and a verified fact; between a fact and a measured fact. And then there is the idea that judgments should be not only independent and impersonal, but based on facts.

Can we, in short, produce through our science teaching an attitude which not only uses the method of the scientist in dealing with specific problems as they come along, but which lives day by day on the basis of verities that are subject to change? To be able to hold our truth as hypothesis, to be prepared to assimilate new truth, from whatever source, to be able to consider ideas without prejudice, is to be educated in a way that seldom emerges from an institutionalized form of schooling. Is it possible to imbue the schools of which we are a part with a spirit that dissolves the restraining, mechanical, arbitrary limitations to thought, to inquiry, which are inescapable in any philosophy that claims to deal with truth as a finished, ultimate and absolute doctrine?

I have taken all this time to remind you, in a somewhat roundabout way, of something we all know, but that we all need to have recalled to us again and again: Science, as search for truth, is as changing as life itself. Schooling, as institution, tends to become fixed, rigid, mechanical. Science, as instruction or imparted knowledge, can not be adequate because our truth is relative and tentative. Science in school must be made a way of looking at the world, a way of dealing with problems, a way of enjoying life, a method of progressive adjustment. Science in school must never be permitted to become a body of standard-

ized doctrine; if it is taught with reference to the history of the human spirit, it should intimate the future as well as outline the past. And finally, as science teachers, we must study not only our "subjects," but our pupils, our communities and our tasks, as though we were ourselves indeed somewhat scientific.

BENJAMIN C. GRUENBERG
NEW YORK, N. Y.

INVESTMENT IN TRAVEL FOR TEACHERS IN TRAINING

THE French nation invests almost as heavily in its prospective teachers as America does in her prospective army officers at West Point. A recent account[1] describes the French educational system as not only paying all the expenses of living, books and some incidental pin-money as well, but as also providing many trips away from the school for her future teachers. A serious consideration for students accepting the French nation's generous aid for their higher education is the fact that the students in turn must agree to teach at least ten years in the French schools or else buy themselves out of the service by repaying the cost of their education to the government. This last condition is one which always draws a groan from a group of American normal school students! They have no such farsighted vocational determinations, another profession always being near in the landscape of desire.

The attitude of the French authorities towards the teaching profession might be valuable to us in many ways—but in this particular discussion we are especially interested in the fact that students are taken on trips away from the campus which are arranged and paid for by the school authorities. In the matter of extending the horizon of interests and perceptions of future teachers by ordered excursions away from books, America lags well behind France. For the study to be reported here has shown definitely that but a few teacher-training institutions subsidize any travel opportunities for their students. In many places, as will be shown later, not even nature study or commercial geography courses are supplemented by experiences away from the classroom.

[1] Rockwell, Harry W., "Teacher Training in France," *Educ. Rev.*, 1923, v. 65, pp. 159–62.

The following report is the result of a questionnaire sent with an introduction by President Matthews of the Tempe Normal School to about 150 teacher-training institutions throughout the country. Data were obtained from 123 of them. There were four questions asked in the questionnaire; each will be discussed in turn. A preliminary note was given to the effect that trips of athletic or debating teams, musical and other organizations were not to be included in the study, but that only visits to factories, places of geologic, scenic, historic or industrial interest and other outings *in connection with the curriculum* were to be considered.

I. Please enumerate the courses you give which involve trips away from the campus, e.g., to factories, etc.

It is surprising to find 21 normal schools (or teachers' colleges; the term normal school will be used to mean either) still utilizing no extra-campus teaching or demonstration mediums. With all recent emphasis in educational theory upon the real and concrete in education, for teacher-training institutions still to make no effort toward giving such concrete experience is indeed unfortunate. The table on the next page illustrates the frequency of trips away from the campus in connection with courses.

Although only five schools reported so specifically, it is probably more widely true that extra-campus exercises are optional with the instructor. One man may come along with a hobby for field trips and arrange for many such exercises, another without this bias overlooking them entirely. Just here is the need for constructive planning. Despite the wide variation in local situation, there should be a common purpose throughout teacher-training institutions which would aim to bring about greater utilization of the surrounding community in connection with the course of study. Schools near the state capital, near famous landmarks, unusual and rare industries, agricultural or industrial features local to the vicinity of the school, should feel the compulsion of theory and practice in making them utilize these opportunities in their instruction. It is too serious a matter for chance or instructor's option to be the sole sanction. Our theory in this connection is far

40 to 50 schools report	15 to 20 report	10 to 14 report	5 to 9 report	1 to 4 report
geography	history	sociology	geology	literature
	agriculture	chemistry	economics	journalism
	civics	biology	psychology	music
	home economics	nature study	general science	banking
	industrial arts		education	survey
			art	health
			botany	zoology
			commerce	

beyond our practice. We no longer believe that books are the sole sources of learning or even the best, but we still adhere largely, even when unnecessarily, to book instruction. Future teachers should certainly have much more than mere book learning, for many of the most vivid touches in their later teaching will come from concrete experience.

II. Does the school arrange the transportation or do the students pro-rate the cost of such trips?

Only seven schools of the 123 reporting have buses which they use to take students to places of educational value. Field trips can be made on foot in many instances. In others, cars are donated. In one school, the students and the school each pay half. In another school a fee of fifteen dollars covers these trips and other incidental expenses of the year, such as the lyceum course, athletic fees, etc. In 62 schools these trips are paid for entirely by the students who attend. This last brings to view a fact which needs no emphasis, namely, that when expenses are pro-rated among the ordinary normal school population, unless they be very small, such assessments prove a hardship to many students, often the source of excluding them from the exercise.

III. Does the school arrange for students to be given an opportunity to visit places of historic or scenic interest in the neighborhood of the school? What places are visited? Please enumerate.

A request for a show of hands made recently in one normal school showed that but 50 per cent. of the seniors about to go out to teach throughout the state had been to the state capital, located but nine miles from the school! Though there are two cotton gins in the town, an equal number had not been through a cotton gin. And as for visiting the only packing plant in the state, located but three miles from the school, but 5 per cent. had done so. These findings would be, from the indications of most of the data of this study, only too characteristic of the conditions in most normal schools of the country.

When one considers the short time that the normal school has in which to train teachers for their work and the seriousness of their duty in developing them adequately during the very brief time before they go out to take over, usually under merely nominal supervision, the children of the state, this extra-campus, cultural feature of their education should be more carefully considered. Visits to places of educational value should not be left to the students' initiative, but made a definite responsibility of the school.

While returns for this question were disappointing as a whole (66, a majority, of the schools doing nothing to see that their students visited places of educational value in the vicinity), still individual returns among the 57 that do foster these visits were extremely encouraging. One school excuses the students for a whole day to visit the state capital. And when one reads that future teachers are being taken to Valley Forge, Niagara Falls, Muscle Shoals, Washington, D. C., Gettysburg, and to wonderful canyons, forests, orange groves and many other interesting places, there is encouragement for the hope that all teacher-training institutions will not be long in utilizing other devices than books for the education of their students. For instance, the following quotations describing such trips are taken as examples of what some schools are doing for their

students. "Keokuk Dam, 100 miles away by college truck, Chariton Hills, 7 miles away by college truck, packing house, 2 miles away, city water plant, 1 mile away, by college truck; also many farms, orchards, stock-raising enterprises." Another school, where the faculty arrange trips and the students pro-rate the cost, reports: "Eastman Kodak, Bausch and Lomb Optical Works, Niagara Falls, Lake Ontario, Eastman School of Music, Rochester Art Galleries, Municipal Court"; another, where students pay their way: "Valley Forge, Brandywine, Paoli, places of historic interest in Philadelphia, the Mint, Commercial Museum, etc."; another reads: "Niagara Falls, St. Lawrence River, Montreal, Boston, Washington, N. Y. City, Gettysburg."

The finest concepts of the educated man or woman have always included something of travel. Are we to neglect this fact in the training of the teachers for the public schools? The issue can not be evaded; we must either give opportunity for travel to teachers in training or else admit that we must continue to turn out in this respect culturally inferior persons for the public schools.

IV. How is transportation arranged for these trips?

Most of the visits made by students are done under faculty chaperonage and are paid for by the students. But few schools report state funds available by inclusion of this item in budgets. It will be difficult, though not impossible, to convince legislators of the utility of this extra-campus study; in many instances, it should enlist the sympathy of business and professional men. For instance, an influential industrial leader has offered to arrange for the transportation of an entire senior class of 150 students over a distance of 220 miles, via one of the great scenic highways of America, to a large copper mine and smelter. Likewise, the owners of a large modern bakery sent transportation for eighty seniors to and from their plant, some ten miles from the normal school.

At the present time, according to our returns, but eleven schools arrange and pay for such trips off the campus. In some schools the trips, being in the neighborhood of the school, require no expense. Often, of course, transportation is donated by faculty members, townspeople or students. In five instances, trips were arranged for the summer session only. In 41 of the 57 reporting trips off the campus for their students, all expenses of such trips were borne by students.

By way of general conclusion it might be said that utilization of educational opportunities near the campus has barely begun in teacher-training institutions. Here and there one finds normal schools which utilize the concrete activities and facts of the vicinity, but by and large the old text-book regurgitation is the vogue.

The suggestions for the development of extra-campus instruction which may come from this study are, first, that teacher-training institutions should make a survey of their locality for the purpose of listing places of educational significance, including those which have bearing upon specific courses and those having more general cultural value. This survey should include an inquiry into the means of getting there (road maps might be prepared where necessary) and the cost of such trips. Frequently railroad and auto transportation can be gotten at reduced rates for large numbers of students. Where possible a school bus should be purchased for trips such as these. It is, of course, often possible to reach these places on foot.

The school assumes a grave responsibility in taking students away from the campus on these trips. It is therefore advisable to obtain parental consent and clearance in writing, perhaps also to request that insurance policies be taken out for the length of the trip. Insurance for five thousand dollars can be secured for twenty-five cents a day.

Second, the arrangements for the trips should be left to a special secretary or a faculty committee. They should be different for the two years of the ordinary course—one series of trips for the juniors, another for the seniors, with provisions for third and fourth year classes in teachers' colleges. This would reduce the numbers going at one time, and, if the trips made by the seniors were the longer and more interesting ones, it might be an item in stimulating some to return and complete the course. A schedule of trips should be made each year, so as to avoid conflicts and insure the taking of all valuable trips. Interference with single trips due to weather or other accidents should not affect the schedule as a whole, for if the

schedule once becomes flexible, it soon loses its value.

Third, the expenses of such trips, if arranged for the year, might be met by the method used in one school reporting, namely, that of collecting a fee at the beginning of the year which will cover all trips made during the year without further levy. Of course, if the expense of such trips could be covered by a state grant in the budget, it would be more desirable from the student's standpoint. Provision might be made for students working their way along on these trips—preparing lunches, driving, etc. Where possible, too, industrial groups or individuals interested in education may be enlisted in support of the course.

Fourth, trips of this sort are best correlated with some definite courses,[2] which, in providing questions and motives, are more likely to result in lasting knowledge. Check-up of what the individual student has gotten from the trips is also best made in this way. But more valuable perhaps than all other possibilities of the use of such trips are the potentialities they contain in stimulating wholesome and sympathetic interest in the community and the state. Teachers who feel sincerely that they are part of a great social organism, who are stimulated by genuine sympathy for the economic problems of the people whose children they are teaching, who have a vivid realization of the historic backgrounds and the present social problems of the state and community by whom they are employed, are infinitely more worthwhile than is the aloof, somewhat resentful, unsympathetic teacher who is too unaware of her own lacks and shortcomings and too well aware of the cultural needs of those who are employing her and entrusting their children to her. The great faith of American parents in the service of their public school system will find no heartier response than that of the teacher who is sensitive to the social and economic elements in the lives of the people of the community, sympathetic with them in their difficulties and genuinely aware of their achievements. *The inculcation of this attitude can not come from school textbooks.*

Tempe Normal School Norman Fenton
Tempe, Arizona

[2] For the description of such a course see Fenton, Norman: "The teacher-in-training and society," *Education*, 1924, vol. 44, pp. 556–61.

OF ELECTRIC RADIATORS

Perhaps it was the sight of some hot electric radiators in front of one of the shops on Main Street, with the reminder that such things were comfortable on these cool autumn evenings, which started my subconscious mind working; whatever the cause, I awoke the other morning after a strange dream. Details are not clear—but this I remember: the college was to build me a house, and the president offered to consult with me regarding certain matters. I told him distinctly that I did not much care what was in the house, so long as the living-room had a generous fireplace—and this apparently harmless, not to say natural, request had started a harangue from my economical superior. It was very expensive to build a chimney; the furnace would heat the house adequately; but if I insisted, the architect would put in an imitation fireplace (without a chimney) in which I could install an electric radiator, which would glow when I turned on the current, which would heat the room in no time, and which might even give a semblance of the cheer that is the chief charm of a log-fire. I protested that that was not the same thing; that I wanted a fireplace, even if there were a furnace in the house; and that while imitations were all very well on board ship, where a log-fire might prove unruly when the sea runs high, they were imitations at best, and I wanted the real thing. He said that the radiator was no "cheap" imitation, and I readily admitted that while it could be installed much more cheaply than an honest fireplace, the maintenance was probably more expensive; but that what I wanted was wood, not an electric current. And then it came over me that the subject of our conversation had changed—as things do change in dreams—and what we were really talking about was college faculties.

All of us who teach have colleagues who can be installed pretty cheaply; who give out heat (of a kind) and who even emit a sort of spluttering spark at times. If one must have sparks, I prefer the good, honest, crackling sparks, though they may jump out on the rug in a temper, occasionally. At least, they are not slimy sparks, which buzz. But this by the way. These radiators of which I speak are doubtless efficient: they glow when you turn the key or press the button—but they have not, somehow,

the life of the old logs. One can feel when he kindles a fire that he is setting free imprisoned sunlight; but there is nothing in an electric current to carry the imagination out into the forest where the trees, which now are logs, grew up.

Nor has the radiator a back log or a bed of ashes. It is clean, convenient and quick—virtues in this mechanical age whose saint is Efficiency. No dampness makes it smoke; no soot flies out from it. It is never cranky; it is always on the job; it is quiet, calm, dependable—and yet not vital. We have known professors whose erudition is profound, whose card-catalogues are above reproach, who move with machine-like regularity through class and committee, but who somehow do not attract us like the grand old teachers of our undergraduate days, those masters who taught not because they were paid to, but because they loved it; who were, perhaps, not so erudite as their successors, but who had the vitality of an oak fire. They knew books and loved them; they loved life and interpreted it; they had knowledge—but they had wisdom, too. They were individuals, not machines; they smoked and they crackled—but they had background, and even in their old age the ashes glowed with life. They did not have a card-catalogue, probably, and would not have known what to do with it if they had had one; but their minds were stored with the best in literature, and their library shelves were filled with well-worn copies of the classics. Not only were their books old friends—but they made us want to know them, too. We warmed ourselves before the intellectual blaze with an esthetic satisfaction the most well-meaning electric radiator could never give; and the memory of those days still glows within us.

Will the time ever come when houses are not built with fireplaces, which are (after all) not a necessity in these days of steam-heat? Are the hours of the old-fashioned college teacher numbered, as his place is taken by efficient, newly-fledged Ph.D.'s? I wonder if the glamour which has hung about education will persist when pedagogical experts replace the old masters—when leisure has been exiled from the academic groves by the tyrant Efficiency. We are rapidly becoming a machine-made age . . . and a room heated by electricity is always dry. Let us insist, Mr. President, on the personality of the fireplace: it must be kept.

ROBERT WITHINGTON
SMITH COLLEGE

EDUCATIONAL EVENTS

DEAN POUND AND THE PRESIDENCY OF THE UNIVERSITY OF WISCONSIN

DR. ROSCOE POUND, dean of the Harvard Law School, was elected president of the University of Wisconsin at an executive meeting of the Board of Regents at Madison, on January 21. He has accepted, and will take office next September.

Dean Pound was born at Lincoln, Nebraska, in 1870. He was graduated at the University of Nebraska in 1888 and a year later took his master of arts degree there; received his doctor's degree at Nebraska in 1897. He attended the Harvard Law School from 1889–90, and practiced law at Lincoln, from 1890 to 1901, and from 1903 to 1907. He served as assistant professor of law at the University of Nebraska from 1899 to 1903 and as dean of the law department from 1903 to 1907. From 1907 to 1909 he was professor of law at Northwestern University and for one year thereafter professor of law at the University of Chicago. Since 1910 he has been at Harvard University. For three years he was Story professor of law. He became Carter professor of jurisprudence in 1913 and dean of the Law School in 1916. Dean Pound has had a distinguished career in the law, in legal education and as a publicist. He acted as commissioner of appeals of the Supreme Court of Nebraska 1901 to 1903, as Nebraska commissioner on uniform state laws 1904 to 1907, as chairman of the Section on Legal Education of the American Bar Association in 1907, and as president of the Association of American Law Schools in 1911. He is the author of eight books, largely on the history and philosophy of law. He holds the honorary degree of LL.D from the Universities of Michigan, Nebraska, Missouri, Chicago, Brown, Harvard, Union and Cambridge, England.

The retiring president of the University of Wisconsin, Dr. Edward A. Birge, is in his seventy-fourth year. He has been president

since 1918. His service as a teacher at Wisconsin began in 1875. He was professor of zoology from 1879 to 1911, and was dean of the College of Letters and Science from 1891 to 1918, and acting president of the university from 1900 to 1903.

AMERICAN CONTRIBUTION TOWARD REBUILDING THE UNIVERSITY OF TOKIO LIBRARY

THE rebuilding of the library of the Imperial University of Tokio, the Japanese center of culture which was destroyed in the catastrophic earthquake and fire of 1923, is assured by a gift of 4,000,000 yen, or approximately $1,600,000, by John D. Rockefeller, Jr. Announcement of the gift was confirmed at Rockefeller's offices in New York recently, where copies of the cabled correspondence between the philanthropist and President Yoshinao Kozai of the university were made available for publication.

Mr. Rockefeller made his gift unconditional, stating only in his cable messages that he hoped, with other available funds, it would make possible the completion of the new library building and also provide a considerable amount for the early purchase of books to replace the 800,000 volumes lost in the disaster.

"I quite realize that in time the Japanese people will themselves accomplish restoration of their cities and institutions which have been destroyed," the donor wrote. "However, I shall regard it as a great privilege to be permitted to hasten the day when your university, which stands among the foremost institutions of learning in the world, will again be provided with adequate library facilities."

In accepting the gift President Kozai expressed the deep gratitude of the university and promised to make the best possible use of the fund.

ANNUAL CONFERENCE OF THE NATIONAL VOCATIONAL GUIDANCE ASSOCIATION

WORKERS in the vocational guidance field from all parts of the country will attend the annual conference of the National Vocational Guidance Association to be held in Cincinnati, February 19 to 21, inclusive. The program will open with a morning devoted to observation in the offices of the Cincinnati Vocation Bureau. At a luncheon in the Gibson Hotel, with Mrs. Max Morgenthau, Jr., as chairman, reports on scholarship work will be presented by representatives of organizations in Atlanta, Boston, Chicago, Cincinnati, New Orleans, New York City, Philadelphia, Providence and Rochester.

There will be four sectional meetings from 2:30 to 4 p. m., on February 19: (1) Guidance in the high schools, with Dr. P. W. L. Cox, professor of secondary education, New York University, as chairman; (2) a joint meeting of the industrial personnel and the psychological sections; (3) the occupational research section, with May Rogers Lane, research secretary of the White-Williams Foundation, Philadelphia, as chairman; (4) placement section, with Mary Stewart, director junior division, U. S. Employment Service, U. S. Department of Labor, as chairman. From 8 to 10 p. m. there will be a general session and a joint meeting of the college and psychological sections. Dean H. E. Hawkes, of Columbia College, will be the speaker.

The sessions of February 20 will begin with a general session and a joint meeting of the high school and occupational research sections. From 9:30 to 10:45 a. m., the chairman will be Florence E. Clark, of the Chicago Vocational Guidance Bureau, and from 10:45 to 12 m., the chairman will be Professor P. W. L. Cox, of New York University. The psychological section will have a luncheon at 12:30. From 2:30 to 4:30 p. m., sectional meetings will be held as follows: (1) High school and junior high school section, with Professor Cox, chairman; (2) the industrial personnel section, with Dr. Walter V. Bingham, director of the Personnel Research Federation, New York, as chairman; (3) the occupational research section, with Mary Price Corre, of Occupational Studies, Cincinnati, as chairman; (4) the placement section, with Director Mary Stewart, of the U. S. Department of Labor, as chairman; (5) the psychological section, with Dr. Mary H. S. Haynes, director Vocational Service for Juniors, New York, as chairman. President Edward Rynearson will preside at a dinner at 6:30. The toastmaster is to be Dr. Frank Dyer, of the Cincinnati Board of Education. The speak-

ers will be Mrs. Frank Gilbreth, Dean L. A. Pechstein, of the College of Education, University of Cincinnati, and M. Edith Campbell, director of the Vocation Bureau of the Cincinnati Public Schools.

On February 21 the schedule calls for a general session and joint meeting of the industrial personnel and placement sections from 9:30 a. m. to 12 m. The business session will follow a luncheon at 12:30. The evening program includes a general session and a joint session with the National Association of Secondary School Principals.

Beside the speakers already mentioned, others at the various sessions will include Professor John M. Brewer, of the Graduate School of Education, Harvard University; Dean Herman Schneider, of the College of Engineering, University of Cincinnati; Professor Jesse B. Davis, of the School of Education, Boston University; Professor Harry D. Kitson, of Indiana University; Principal R. T. Hargreaves, of the Minneapolis Central High School; Principal L. W. Brooks, of the Wichita, Kansas, High School; Dr. Jennie M. Turner and Mrs. W. P. Tippet, of the Wisconsin State Board of Vocational Education; Albert Fertsch, of the Gary, Indiana, schools; Vierling Kersey, of the Los Angeles schools; W. H. Stone, of the Lathrop Trade School, Kansas City, Mo.; Dr. J. D. Stark, of the Pittsburgh schools; Professor Stanley B. Matthewson, of Antioch College; Dr. Anna Y. Reed, of New York University; Joseph V. Hanna, of the Joliet, Ill., Township High School and Junior College; Dr. A. H. Edgerton, of the University of Wisconsin; Professor Ralph E. Pickett, of the School of Education, New York University; Dorothea De Schweinitz, supervisor of vocational guidance and placement, Philadelphia; Czarina J. Giddings, supervisor of vocational guidance, Cleveland; Cleo Murtland, of the University of Michigan; Marjorie Gillet, superintedent of guidance and placement, Milwaukee; Mary Schauffler, junior division, U. S. Employment Service; Abigail Schwab, acting director Cincinnati Placement Office; Frederick J. Allen, editor of the *Vocational Guidance Magazine*, Harvard University; Margaret M. Alltucker, Research Division, National Education Association; Florence E. Clark, Chicago Vocational Guidance Bureau; H. G. Kenagy, director of research, Proctor & Gamble; Professor Arthur D. Payne, of Teachers College, Columbia University; Owen D. Evans, of Washington, D. C.; I. A. Buell, of Hartford, Conn., and A. S. Barr, of the Wisconsin Department of Education.

BUDGET APPROPRIATIONS FOR THE UNIVERSITY OF CALIFORNIA

BUDGET appropriations outlined for the University of California for the biennium 1925–27, call for an increase of $1,500,000 over that of 1923. The increase will be utilized mainly by the College of Agriculture and the southern branch of the university at Los Angeles. Robert G. Sproul, comptroller of the university, last week outlined the contemplated utilization of the funds in the event that the recommendations of Governor Richardson were accepted by the legislature.

Increases are included in the report for the extension division of the university, and also the Scripps Institution at La Jolla; but no new appropriations are asked for the university at Berkeley. The budget includes the sum of $11,358,947 for the maintenance and operation of the university in all its parts, which means wherever the rural free delivery reaches in the state. This figure compares with the sum of $9,853,947 voted by the legislature in 1923 for similar purposes.

In addition to sums recommended for salaries, assistance, expense and equipment, the governor's budget includes $680,000 for capital expenditure for permanent improvements. This is divided into six items of land purchases and building construction, of which Davis, Berkeley and southern California each get two. No provision is made for the purchase of a new site at the southern branch of the university, nor for the construction of new buildings thereon.

A NATIONAL INSTITUTE OF RELIGIOUS EDUCATION

A PLAN is to be presented to the Presbyterian General Council at Washington, D. C., in March for an Interdenominational National Institute of Religion, it is announced. The institute is described as a "National University" for religious education.

The project has been under consideration for some time by the Capital Presbyterian Commission, and an outline of the plan, as prepared by the Rev. Dr. George B. Stewart, of Auburn, N. Y., President of Auburn Theological Seminary, as chairman of the commission, after consultation with other members, was made public on January 24. The institute, as designed by Dr. Stewart, would have departments as follows:

A school of theology, corresponding to a theological seminary, but with new as well as standard subjects, to enable the minister of to-morrow to meet all the requirements of his office.

A school of religious education for directors of religious education, pastors' assistants, church secretaries, workers among boys, girls and other groups.

A school of missions for missionaries, national and foreign.

A school of sacred music and ecclesiastical fine arts, for church music, directors, organists, church architecture and decoration.

A school of evangelism for evangelists.

A school of religious drama for visual education in religion, including the technical side of pageantry and the use of the lantern.

A school of publicity for religious promotion.

A correspondence school for extramural students.

THE NEW YORK SCHOOL SURVEY

THE New York City Board of Education School Survey Committee, which has been investigating the public schools for six months under the direction of Dr. W. H. Allen, last week gave out a list of 21 of 400 "high spots" found among the elementary and junior high schools. "Low spots" will be given out later, as well as both "low" and "high spots" for the high schools.

The summary of "high spots" was prepared for Superintendent of Schools Dr. William J. O'Shea and the Survey Committee by a committee of three, consisting of District Superintendent Arthur C. Perry, Jr., president of the Society for the Study of Experimental Education; Principal Anna A. Short, of P. S. 28, Manhattan, and Principal Rufus A. Vance, of St. Clair McKelway Junior High School in Brooklyn, president of the New York Principals Association.

Laudable innovations in the lower schools are listed by the committee as follows:

Among many ways of furthering student help, one school sends parents balanced diet charts, with special reference to wholesome breakfasts.

Free piano instruction is given by one teacher as one way of promoting extra curricular activities.

In character training one school concentrates on some special habit each month, and has pupils make progress reports as to undesirable habits broken.

In the study of current national, state and local problems, one school calls upon pupils in assemblies for two-minute speeches.

In studying world problems, one school had the Washington Disarmament Conference dramatized at commencement exercises.

Among ways of securing cooperation of parents, one school reports a chain of letters, typed in Italian and setting forth the need for early and constant correction by parents of pupils' faults discovered in school.

Each pupil in one school compiles a history of New York, illustrates, types and binds it in book form.

THE LIBRARY AND ADULT EDUCATION

THE Commission on the Library and Adult Education, which had a meeting recently in Chicago, at the headquarters of the American Library Association, has issued the following statement:

The commission on The Library and Adult Education has been greatly impressed by Dr. W. S. Learned's report on "The American public library and the diffusion of knowledge" (Harcourt, 1924). We have found it a study showing unusual acquaintance with our problems, an intimate knowledge of detail remarkable indeed in any one not closely associated for years with library work. But we have found in Dr. Learned's report much more than familiarity with the present development of public libraries and the American Library Association. He has opened up vistas for us, avenues of possible achievement, new opportunities. His report has already inspired many of us to efforts in new fields and to new efforts in old lines. It will greatly aid us in forming that public opinion which alone will make these newer forms of library work possible.

The members of the commission, further, as lovers of books, wish to express their pleasure and admiration for the fine way in which the report has been printed—a delight to the eye and a fitting dress for an inspiring work.

The library of the future, according to Dr. Learned, will be "a community intelligence service." It will include all the best that is being done in our reference departments, but it would also require a more highly specialized personnel which must "command all the college teacher's familiarity with the literature of a strictly limited field, plus the power which the college teacher may and often does lack completely, namely—the power speedily to read his applicant's mental equipment and point of view, and to sense intuitively the character of his personal need. . . . A community of the size, say of Akron, would have a staff of 20 or more specialists, whose business would be to make knowledge popular through books and by talks, lectures and interviews. This staff would be the driving force in education."

EDUCATIONAL NOTES AND NEWS

DR. B. M. WALKER, vice-president, has been elected president of Mississippi Agricultural and Mechanical College. He succeeds Dr. D. C. Hull, whose resignation to engage in an occupation requiring "less mental and physical strain" was accepted by the board of trustees, to take effect July 1.

DR. DANIEL STARCH, associate professor of marketing at the Harvard Business School, has been appointed director of the newly-formed Department of Organized Research of the American Association of Advertising Agencies.

ALBERT CRAIG BAIRD, professor of argumentation at Bates College, will join the University of Iowa faculty next September, according to an announcement from Iowa this week. Professor Baird arranged and conducted the Bates debating team in two trips to England to meet the debaters of the Oxford Union. There is a project at Iowa, it is reported, to have him take a representative American debate team on a tour of the British Empire next year.

DR. WILLIAM E. MEAD, professor of English at Wesleyan University, has submitted his resignation to the board of trustees, to take effect next September. Professor Mead has taught at Wesleyan for 34 years.

PROFESSOR ROBERT SENECA SMITH, of Smith College, has been appointed to the Horace Bushnell professorship of Christian nurture in the Divinity School of Yale University. The appointment will be effective July 1.

DR. L. A. HOWLAND, acting president of Wesleyan University, has been appointed a member of the Connecticut State Board of Education to fill the unexpired term of the late President W. A. Shanklin.

DR. WOLFGANG KOEHLER, of the University of Berlin, is to join the psychology department of Clark University as visiting professor, according to the Boston *Transcript*.

DR. LAWRENCE B. PACKARD, Watson professor of history at the University of Rochester for the past eight years, has been appointed professor of history at Amherst College.

DR. S. E. MORRISON, professor of American history under the Harmsworth foundation at the University of Oxford, England, and Dr. A. M. Schlesinger, head of the department of history at the University of Iowa, have been appointed professors of history at Harvard University.

PROFESSORS GEORGE D. STRAYER and N. L. Englehardt, of Teachers College, Columbia University, have been invited by the board of education of Nutley, New Jersey, a suburb of New York City, to make a survey of the school needs of that town.

DR. RUSSELL H. CONWELL, president of Temple University, is spending several weeks in Florida. He will return to Philadelphia to celebrate his eighty-second birthday on February 15, which is founder's day at Temple.

DIRECTOR WILLIAM H. GEER, of the Department of Physical Education, Harvard University, was recently elected president of the Society of Directors of Physical Education in American Colleges.

PROFESSOR LEONARD V. KOOS, of the University of Minnesota, delivered the first lecture on the Inglis Foundation at the Harvard Graduate School of Education on January 14. His subject was "Trends in American secondary education."

PROFESSOR WILLIAM H. KILPATRICK, of Teachers College, Columbia University, is to be the speaker at the celebration of the one hun-

dred and twenty-fifth anniversary of the White-Williams Foundation at Philadelphia, on February 10.

DR. MARION EDWARDS PARK, president of Bryn Mawr College, delivered the address before the mid-year graduating class of the South Philadelphia High School for Girls last week.

DR. GEORGE E. VINCENT, of the Rockefeller Foundation, will be the speaker at the Connecticut State Teachers' Association meeting at Hartford, on February 14.

DR. JOSEPH FRENCH JOHNSON, dean of the School of Commerce, of New York University, died on January 22, at Newfoundland, N. J. Death resulted from heart disease. Following graduation at Harvard in 1878, and a year of study in Germany, Dr. Johnson served on the staffs of the Springfield *Republican*, the Chicago *Tribune* and the Spokane *Statesman*. In 1893 he was appointed to the faculty of the Wharton School of the University of Pennsylvania, where he taught for eight years. He lectured on finance at Columbia University from 1899 to 1903. In 1901 he became professor of political economy at the School of Commerce of New York University, and in 1903 was made dean.

CHARLES W. FARR, assistant superintendent of schools in Cook County, Illinois, for the past 34 years, died of pneumonia in Chicago last week.

PROFESSOR C. E. CONANT, formerly with the Philippine Bureau of Education and later head of the department of comparative philology at Indiana University, died on January 27, aged fifty-five years.

DR. EDWIN R. SNYDER, president of the San José State Teachers College, and one of the best known California school men, died on January 13, after an illness since last November. Prior to July, 1923, he had been for ten years California state commissioner of vocational education, and earlier had served as vice-president of the Fresno Normal School, assistant superintendent of the city schools of Fresno, and superintendent of the city schools of Santa Barbara. In 1915 Dr. Snyder assisted Superintendent Will C. Wood and Dr. McNaught in working out regulations governing teacher training in California. Dr. Snyder held the bachelor's degree of Stanford University. In 1907 he received a scholarship and in 1908 a fellowship at Teachers College, Columbia University. In 1909 he received the degree of doctor of philosophy from Columbia and the doctor's diploma in education from Teachers College.

D. K. DUNTON, principal of Central High School, Pueblo, Colorado, and senior member of the board of directors of the Colorado Education Association, died on January 5.

GOVERNOR ALFRED E. SMITH, of New York, has accepted the chairmanship of the New York committee on the Gorgas Memorial, which will attempt to raise $600,000 as part of a fund for an institute for the study and prevention of tropical diseases in Panama. President Coolidge is honorary chairman for the nation.

DR. NICHOLAS MURRAY BUTLER, chairman of the National Committee of the United States for the Restoration of the University of Louvain, has issued a statement expressing the hope that the university's library will be completed next year as planned, in view of a letter by Mgr. Ladeuze, rector of the institution, announcing that the plan to rebuild the library had collapsed because of the failure of Americans to contribute the necessary funds. In his letter to Herbert Hoover, Mgr. Ladeuze said 7,000,000 francs had been expended on the work and 12,000,000 more was required.

GEORGE F. BAKER, of New York, has made a gift of $100,000 to Dartmouth College as a special endowment fund in memory of his uncle, Fisher Ames Baker, who was graduated from the college in 1859.

PROFESSOR FRANK N. FREEMAN will be toastmaster at the University of Chicago dinner held in connection with the Department of Superintendence meeting at Cincinnati, February 25, and the speakers will include President Lotus D. Coffman, of the University of Minnesota, and Director Charles H. Judd, of the University of Chicago School of Education.

AMONG the members of the newly formed Federated Council of Art Education are Professor Walter Sargent, chairman of the department of art in the University of Chicago, and William G. Whitford, assistant professor of art education in the College of Education, the

former representing the National Federation of Arts, Literature and Science of the same institution. The primary purpose of the new council is to consider problems of art education and to promote investigations and study in this field.

DR. FREDERICK S. BREED, of the College of Education of the University of Chicago, and Dean Ernest H. Wilkins, of the Colleges of Arts, Literature, and Science of the same institution, are making an analysis of the activities and qualities required of instructors in large elementary college courses. It is hoped that this analysis will ultimately be used by instructors as a voluntary scale for the purpose of self-measurement.

A NEW $400,000 building has been given to Colgate University, by Austen Colgate, of Orange, N. J., a member of the firm of Colgate & Co., and for many years a trustee of the university.

AT the recent meeting of Section I (Psychology) of the American Association for the Advancement of Science in Washington, a conference was called of those interested in psychological consultation for college students. This conference was held under the chairmanship of Professor D. C. Rogers, of Smith College. Some twenty institutions were represented by a total of about thirty men and women. Professor E. A. Doll, of Ohio State University, gave the principal address, and described the working of the system established there. More students apply for this assistance than can well be dealt with, and it was evident that psychological consultation is sought spontaneously by a large proportion of the student body. Several present estimated the proportion that need such assistance at about 20 per cent. or more. The cases described by Professors Doll and H. H. Goddard were for the most part psychopathic. Other speakers made it clear that the psychological consultation can deal profitably with difficulties in study, and with faulty adjustments and personal problems of a wider range. The importance of cooperation with the college physician or bureau of student health was emphasized. Work of this sort, as done at Princeton, Smith, Chicago Normal College, Ohio University, and at other institutions, was briefly described by other speakers. It was voted to give permanent effect to the conference by the appointment of a committee of three. Professors Doll (chairman) and McComas have been appointed for this work, with another, to represent the work in colleges for women, yet to be named.

REPRESENTATIVES of the English departments of Smith, Vassar, Wellesley and Mount Holyoke Colleges and of 16 girls' preparatory schools of the country met at the Ethical Culture School, New York City, last week and discussed methods of preparing prospective college students and of correlating high school and college work in English.

"FINGERS in the Educational Pie" is the title given by the New York City Teachers' Union and the Teachers' Union Auxiliary to a series of discussions that opened on January 24. "Why is the American Legion active in the field of education?" was the topic set for the first meeting, with Robert G. Paterson, commander of the New York County organization of the Legion, and Professor Harry A. Overstreet, of City College, as the speakers. Royal J. Davis, of the editorial staff of the New York *Evening Post*, presided. Other meetings and subjects are as follows: February 21, "The politicians," speakers, Joseph K. Van Denburg, of the New York Board of Examiners, and I. Edwin Goldwasser, a former district superintendent; March 21, "The theorists," speakers, Edwin H. Reeder, instructor in elementary education, Teachers College, Columbia University, and Joseph K. Hart, associate editor of the *Survey;* April 18, "The teachers," speakers, Ruth Gillette Hardy, Girls' Commercial High School, New York City, and Professor Franklin W. Johnson, Teachers College. John Lovejoy Elliott, of the Ethical Culture School, will preside at the April session.

THE College of Education of Ohio State University will hold its fifth annual educational conference at Columbus, April 2, 3 and 4. Professor George F. Arps is chairman of the executive committee in charge of the conference.

IN order to secure teachers of home economics for Indian schools and other similar positions the United States Civil Service Commission will hold examinations on February 18 and March 11 in all parts of the United States. The grades

of positions to be filled are: Teacher of home economics, prevocational grades, $1,200; teacher of home economics, junior vocational grades, $1,440, and principal of home economics, $1,560. These are entrance salaries, and do not include furnished quarters, heat and light, which will be furnished free of cost.

THE tentative program for the annual convention of the Progressive Education Association, which is to meet April 23 to 25 in Philadelphia, has been announced. "The problem of the American colleges" is the topic for Thursday evening, April 23, to be discussed by President Hopkins, of Dartmouth, and others. Friday will be given over to two sessions, one on "Individual education and the social group," with the following speakers: Carleton W. Washburne, superintendent of schools, Winnetka, Ill.; Flora W. Cooke, Francis W. Parker School, Chicago, and Dr. Lucy L. W. Wilson, South Philadelphia High School for Girls; the other on "Progressive education and the public schools," the speakers to be Dr. Armand Gerson, Philadelphia; Angelo Patri, New York City, and Dr. Bird T. Baldwin, University of Iowa. The Saturday morning session will be devoted chiefly to brief reports from delegates to the convention, especially private and public school executives on the work going on in their schools. Among those expected to speak are Edward Yeomans, of Ojai Valley, Calif., and Mrs. Beatrice Ensor, of England, secretary of the "New Era."

SIX graduate fellowships for study in Belgium for 1925–26 will be awarded this year, according to the announcement of the Commission for Relief in Belgium. Applications must reach the chairman of the committee, Dean L. B. R. Briggs, Harvard University, by February 15. These fellowships were established to commemorate the work of the Commission for Relief in Belgium during the Great War and to promote closer relations and the exchange of intellectual ideas between Belgium and America. Each carries a stipend of 15,000 francs plus tuition fees, payable in Belgium and first-class traveling expenses to and from the university in Belgium. The fellowships are open to men and women, and are tenable for one year. Preference in selection is given to applicants between the ages of 25 and 33 who are unmarried and who intend to take up teaching or research as a profession.

THE 1925 meeting of the National Congress of Parents and Teachers will be held at Austin, Texas, on May 11.

FIVE representatives of the Interior Department, Bureau of Education, two representatives of the Virginia State Board of Education and the dean of the School of Education of the College of William and Mary will cooperate in making a complete survey of the school system of Charlottesville, Va. The survey was undertaken at the request of the State Board of Education of Virginia and of the School Board of Charlottesville.

A COMMITTEE to organize a program on the problems of early elementary education for the meeting of the World Federation of Education Associations at Edinburgh, Scotland, July 20 to 28, has been appointed by Dr. A. O. Thomas, president of the federation.

THE fiftieth anniversary of the founding of George Peabody College for Teachers, Nashville, Tennessee, will be celebrated February 18, 19 and 20.

FIVE twelve-hundred-dollar scholarships for the training of psychiatric social workers have just been given to the Smith College School for Social Workers, according to the announcement of Professor Everett Kimball, director of the school. The amount of each fellowship will be enough to pay the expenses of the regular course at the school which includes a session in theory held in Northampton during July and August of 1925, a second session of nine months of field work in some clinic or psychopathic hospital and a final session again held in the college, where the fruits of this experience may be discussed. These fellowships will allow sufficient funds for maintenance during practical work so that the authorities of the school may assign a student to that agency with which she will receive the most valuable training. The applicants for these fellowships, which are to be awarded early in May, must be college graduates and have had one year of experience in some field of social work.

FOUR scholarships, totaling $1,000, for students majoring in horticulture or agriculture, have been given to the Massachusetts Agricul-

ture College by the Massachusetts Society for Promotion of Agriculture.

PLANS of individual education will be discussed at a joint conference of the Bureau of Education of the Interior Department and the School of Education, University of Pennsylvania, at the University of Pennsylvania, March 27. One session will be devoted to a discussion of individual instruction as applied in two of the large high schools of Philadelphia and another session to discussion of the plan as applied to the small high school.

THE Navy Department has established four-year naval reserve officers courses at George Washington University, Washington, D. C., and at St. John's College, Annapolis. Arrangements were authorized at a conference attended by representatives of the Navy Department, Dr. Howard L. Hodgkins, dean of George Washington University, and the following from St. John's: Dr. Enoch B. Garey, president; Dr. Walter R. Agard, dean, and Captain D. M. Garrison, head of the department of mathematics, who formerly was head of the mathematics department of the United States Naval Academy. The purpose of the course, according to present plans, is to provide facilities for the training of naval reserve officers along lines adopted by the army in the Reserve Officers' Training Corps. Candidates will be enrolled as midshipmen in the Naval Reserve and at graduation will be commissioned ensigns in the reserve force. A telegraphic request from the University of Washington, at Seattle, to be designated for a Naval Reserve course has reached the department since the project was first taken up. It is under consideration for early decision.

THE American School for Oriental Study and Research in Jerusalem is erecting its first building with funds provided by the will of the late Rev. James B. Nies, one of the chief patrons of the school, who died in 1922 and who bequeathed $50,000 for the erection of a new building for the school. The new school is actually a group of three buildings, set about an inner quadrangle. Each of the three buildings has its length along one of the sides of the quadrangle, and they are connected by a loggia running around the inner court and flush with it. Members of the corporation, directing the work of the institution, include the following: Amherst College, President George D. Olds; Bangor Theological Seminary, President Warren J. Moulton; Brown University, Professor Henry T. Fowler; Episcopal Theological School (Cambridge), Professor Max L. Kellner; Harvard University, Professor D. G. Lyon; Mount Holyoke College, President Mary E. Woolley; Newton Theological Institution, Professor Winfred N. Donovan; Smith College, Professor Irving F. Wood; Trinity College, Professor F. C. Babbitt, and Wellesley College, Professor Eliza H. Kendrick. Professor Mary I. Hussey, of Mount Holyoke College, is field secretary.

INFORMATION concerning world universities is contained in the first quarterly publication of the International Office of University Intelligence, which was recently created as a new co-operative feature of the League of Nations. These publications will endeavor to coordinate in compact form international university information and fulfil the purpose of the new office, which is that of serving as a bridge between higher institutions of learning in all countries. They will relate the exchange of professors and students, list the books of interest to university people and catalogue the administrative measures adopted by various universities concerning the conditions under which foreigners may follow courses of study, explain scholarships, the tuition conditions affecting foreigners and set forth the special courses which may be open to them.

THERE were eleven women among the forty-two medical students graduated last year from the medical school of the University of Sofia, Bulgaria, the first class graduated from the school since its opening four years ago. The enrollment of women in the other classes is much larger. Women are entering the medical and dental professions in conspicuous numbers. The majority of dentists in Sofia are women. In the legal profession women are meeting with some opposition. The Bar Association is denying recognition to women lawyers, and the bench has shown a disposition to deny them licenses to practice. Women are admitted to the law school of the university, however, and the women's associations of the country are exerting pressure on Parliament to remove all

obstacles to women seeking admission to the practice of law.

THE commission charged with the examination of the report on intellectual cooperation has adopted a resolution accepting the offer of France for the creation of an international institute of intellectual cooperation. According to the account in the *Journal* of the American Medical Association, Mr. Charlton, delegate from Australia, desirous of safeguarding the interests of the League of Nations, urged the commission not to accept the offer France had made, since the country in which the seat of the institute should be established would become, to a certain extent, the center of civilization. The only solution possible, as it seemed to Charlton, would be the creation at Geneva of a truly international central institute, alongside the seat of the League of Nations. The Australian delegate feared, furthermore, that the creation of the institute at Paris would cause expenditures which the subvention of the French government would not cover. M. Avenol, general secretary of the League of Nations, assured the commission of the contrary, it being provided that the commission of control should have charge of the expenditures of the institute. Mr. Murray, delegate from England, while sharing, in principle, the opinion of Charlton, referred to the circumstances under which the French government had made its offer. The League of Nations had refused to grant the commission on intellectual cooperation the appropriation it required. In its appeal to the members of the League of Nations, the commission received only one reply—that of France. Consequently Mr. Murray held that its offer could not well be refused.

DR. JEREMIAH E. BURKE, superintendent of the Boston public schools, was the guest of honor on January 26 of the Eliot School Association, Boston. In his address he advocated raising the compulsory school age to 16 years, with an additional continuation period of two years.

DISCUSSION

A HIGH SCHOOL MARKING SYSTEM

CLASSROOM teachers, as a rule, find giving of grades a difficult and perplexing problem. The question often arises as to what constitutes an "A" student or a "B" student, etc., or, to put it another way, what characteristics or qualities on the part of a student will entitle him to a grade of say between 94–100 or 88–93, etc., using a percentage basis instead of the letter basis.

The following plan is an attempt to solve this problem. This plan has been used by Principal A. V. Lockhart, of the Lockport, Illinois, Township High School, and has been found to be very successful. It will be noticed that the grading scheme can be used with the percentage or the letter basis. In the plan as presented here, grade points are used. In many schools so many "credits" are given for grades of varying quality instead of grade points. The plus or minus system may be used with the letter basis of grading. No list of qualities are given for the plus or minus types of students. A "B plus" student is, of course, a little better than a "B" student, but not quite as good as an "A" student. The "C" student in this plan is the average student. The "F" student is, of course, the failure.

94–100 *An "A" Student*, 5 grade points. ("B plus" student 4 grade points.)

(1) Consistently does more than is required.

(2) Has a wide vocabulary at his command.

(3) Is always alert and takes an active part in class discussion.

(4) Has unusual dependability in taking assignments.

(5) Is prompt, neat, and thorough in all work and unusually free from teacher's correction.

(6) Knows how to use books and is a rapid reader.

(7) Has initiative and originality in attacking new problems.

(8) Has ability to associate and rethink the problem and can adapt himself to new and changing situations.

(9) Has enthusiasm for and interest in the work.

(10) Has ability to apply ideas gained in study of everyday life.

88–93 *A "B" Student*, 3 grade points. ("C plus" student, 2 grade points.)

(1) Frequently does more than is required.

(2) Has good vocabulary and has ability to speak with conviction.

(3) Unusually alive to the situation at hand.
(4) Careful in complying with assignments.
(5) Eager to attack new problems and profits by criticism.
(6) Prompt, neat, thorough and usually accurate in all work.
(7) Has ability to apply the general principles of the course.

79–87 *A "C" Student.* 1 grade point.

(1) Does what is required.
(2) Possesses a moderate vocabulary.
(3) Willing to apply himself during the class hour.
(4) Does daily preparation with comparative freedom from carelessness but preparation often limited by personal interests.
(5) Attentive to assignments.
(6) Has ability and willingness to comply with instructions and a cheerful response to correction.
(7) Reasonably thorough and prompt in all work.
(8) Has average neatness and accuracy in all work.
(9) Has ability to retain recollectively the general principles of the course.

75–78 *A "D" Student,* 0 grade point.

(1) Usually does what is required.
(2) Attendance often irregular.
(3) Tools and equipment for work sometimes lacking.
(4) Frequently "misunderstands" assignments.
(5) Willing but mentally slow in complying with instructions and corrections.
(6) Careless in preparation of assignments.
(7) Lacking in thoroughness and sometimes tardy with work.
(8) Careless in presentation of work.

0–74 *An "F" Student,* minus 2 grade points.

(1) Usually does a little less than is required.
(2) Listless and inattentive in class.
(3) Tools and equipment for work often lacking.
(4) Always tardy with work.
(5) Seldom knows anything "outside the lesson."
(6) Retains fragments of the general principles of the course.
(7) Lacking in the qualities of the first three groups to the extent that he can not or will not do the work.

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BOOKS AND LITERATURE

The Platoon School. A Study of the Adaptation of the Elementary School Organization to the Curriculum. By CHARLES L. SPAIN. New York, Macmillan, 1924. 262 pp.

SINCE 1918 Detroit has done more than any other American city in developing a consistent program in which the platoon school, or work-study-play plan of school organization, has been a leading feature. From six schools in 1919 organized on the platoon plan to 77 so organized this year is a change sufficiently rapid to challenge attention, and, whether the ultimate decision on the platoon plan is favorable or not, school administrators in other cities will welcome the opportunity Dr. Spain's book gives to study what has taken place in Detroit.

It was in 1919 that the Detroit Board of Education, after experimenting with the platoon plan for a short period, adopted the following resolution:

> That the educational needs of the children of the kindergarten and the first six grades be met by building large elementary schools, with auditoriums and gymnasiums, planned definitely to satisfy the requirements of the platoon form of organization.

Dr. Spain states that opposition was expected, but that, as a matter of fact, the new plan caught on successfully with children, teachers and parents. The 77 schools now operating on the plan include 17 new buildings, 42 new additions to old buildings and 18 existing buildings reorganized.

Dr. Spain finds it necessary to retell considerable history of education, emphasizing, especially, the changes in school curriculum of the past hundred years, but most readers will find of special interest the account of the programs as they are actually worked out in Detroit and the frank and interesting discussion of results in the Detroit platoon schools. In a chapter on "Controversial questions," the author takes up such objections as: (1) "Does not the platoon school organization make project teaching almost impossible because of its departmentalization?" (2) "Do not pupils in platoon schools lose the personal touch?" (3) "Are not pupils in a platoon school under a nervous strain?" (4) "Does not frequent change of classes waste

time and cause disorder?" In his concluding chapter Dr. Spain states the case for the platoon school as follows:

> The data in this study present convincing evidence that the platoon school reflects in the largest way possible the best ideals and aims of society; that . . . before all else it gives consideration to the child's physical well-being and assures him an opportunity to work, study and play under favorable conditions; that in spite of its marked emphasis on the physical and cultural phases of education a scientific measurement of results in the three R's in the platoon schools over a period of years reveals a higher standard in those schools than in the non-platoon schools over a like period; that the platoon organization as developed in Detroit has proved to be a smooth-running administrative mechanism which operates to the satisfaction of pupils, teachers, principals and communities; and finally, that without making unreasonable financial demands upon the public, the platoon school offers a varied and enriched curriculum taught by well-trained specialists, in a physical environment that conserves the health, safety and happiness of the children.

An International Yearbook of Child Care and Protection. Compiled by EDWARD FULLER, with an introduction by PERCY ALDEN. Longmans, Green and Co., London and New York, 1924. 448 pp.

WHEN Queen Victoria of England came to the throne, Mr. Alden reminds us, "there was not one single Act on the Statute Book of Great Britain that could be said to have been framed in the interests of the child." How different the situation now is throughout the world is revealed in this yearbook, made possible by the Save the Children Fund, which endeavors to give "a faithful picture of the present position regarding the life and health, the education and nurture, of the world's children." In the 350 or more sovereign states, colonies and dependencies which make up the world there are comparatively few, according to the yearbook, where no efforts for the care and protection of children can be recorded.

Educational work is still the most widespread of the efforts for children, and Mr. Alden points out that some of the smaller countries took a pioneer part in the matter of introducing democratic schools. Child welfare, decrease in infantile mortality and enlightened treatment of the juvenile offender are some of the other more important steps in advance as recorded for each nation and state. Alphabetical arrangement of countries and a tabular view at the close make the book a convenient one to use.

Training for the Professions and Allied Occupations. Facilities Available to Women in the United States. By the Bureau of Vocational Information, Emma P. Hirth, director, Beatrice Doerschuck, assistant director. New York, 1924. 742 pp.

SUCH has been the rapid expansion of women's work and the corresponding increase in opportunities for professional and technical training in the past decade that a new survey was very much needed. The present volume, compiled by the one outstanding agency in the field, is one of the most comprehensive records of training facilities that has ever appeared. It gives specific and authoritative information for the following main fields and numerous subdivisions: Agriculture, architecture, art, business, dentistry, dramatic work, education, engineering, home economics, landscape architecture, languages, law, library work, medicine, music, nursing, personnel work, pharmacy, public health, religious work, science, social work and writing. The reader is reminded in the foreword that "both in the matter of classification of occupation and in the treatment and point of view of the descriptive material the emphasis is on training rather than on occupational content."

Except for a few special fields the authors have made it a rule to include only institutions requiring for admission full high school education or its equivalent. On this and other question of standards the bureau says:

> In general the best schools hold consistently to the higher educational requirements for admission, and from constant study of women's work in many professions and occupations it is obvious that women can not afford to handicap themselves with inferior preparation. . . .
>
> The trend in professional education seems to be to extend the period for such training on the one hand, and, on the other, to urge the need of a better general education on which to base it. It is essential for education to consider how these parallel developments may be reconciled with the

growing desire to shorten the long educational process for professional workers and at the same time to produce more liberal and better trained persons. Significant for women is the fact that to-day, with the exception of a few obdurate outposts, most professional schools are open to them on equal terms with men.

W. C. R.

REPORTS

COLLEGE INFLUENCES AND THE Y. M. C. A.

CRITICISMS of "the prevalent lecture-credit system" in American colleges and universities and of "the present trend of fraternity life" are contained in a report, recently made public, of Sub-Committee X of the Advance Program Commission of the Young Men's Christian Association. The Student Department of the International Committee of the association is publishing the report, which is entitled "What are the dominant influences bearing on the personal religious faith of college students?"

The members of Sub-Committee X were Dean Thomas W. Graham, chairman; the Rev. John T. Dallas, Dr. Samuel Cavert, Dr. A. K. Foster, Dr. C. B. McAffee, Dr. C. W. Gilkey, Chancellor E. H. Lindley, President E. E. Rall and Francis Miller, secretary. The committee's discussions and report were based in part on answers to questions "circulated among a select list of competent people."

The paragraphs of the report on "The educational system" read as follows:

> It is evident that the prevalent lecture-credit system is not capable of developing sufficient self-reliance. Further, this system is responsible to a large extent for the spiritual chaos in which the student finds himself, because it confirms him in the previous habit he may have had of accepting truth on authority. But the new authorities are so antithetical to the old that a very profound conflict in the student's mental and moral life is unavoidable. If the future generation is to supply society with "researchers," we can not now afford to breed a race of submissive minds in the colleges. Some of the best minds in the present generation were not university trained. As a result of the system to which he has become accustomed the American undergraduate grabs an answer to a problem from someone else, writes it down, and imagines he has it. He lives to get answers to questions. The "credit" element in securing a degree has been responsible for the intellectual death of thousands of students and has introduced an idea into college life which has produced a most disastrous effect, in its indirect consequences, upon the motives and values which determine and influence conduct.
>
> It is most encouraging to note the widespread dissatisfaction with the present system among educators and responsible university administrators, and the variety of experiments that are already being made to discover some better plan. President Aydelotte, of Swarthmore, has reported that some forty colleges or universities have recently begun to experiment with various modifications of the tutorial system.

Discussing "Problems of campus life," the committee expresses its belief that "the present trend of fraternity life constitutes one of the main elements, if not the main element, in our problem." The report states that:

> The periods of "rushing" and other purely fraternity activities occupy an entirely disproportionate amount of an undergraduate's time. . . . The fraternity is apt to completely monopolize and arrange the social life of its members. It tells the freshmen what they must go out for and "heel." Its influence tends to crush individual initiative and enterprise and reduce the new men as they come into its membership to the very mediocre level of the crowd. Further, in universities where such extravagant sums are now being spent on fraternity houses, it is obvious that through the erection of these houses another vested interest is being created which will give a comparatively small but wealthy group of alumni a disproportionate amount of influence on college life and university policy.

The committee, although noting improvement in some parts of the country in recent years, still finds that the tendency on the whole in the universities is toward commercialization of sport.

"In spite of occasional gross infringement of the Eighteenth Amendment and reprehensible college dances, it seems that on the whole social life is more wholesome than it has been since the war."

The committee makes six recommendations for the advancement of the Student Movement, closing with emphasis upon the need for the Y. M. C. A. secretary who will be "not only an intelligent friend but also a tutor of men."

AN EXPERIMENT IN SUPERVISING COLLEGE TEACHING[1]

IN the June, 1922, issue of *The Educational Review*, there appeared an article of mine under the caption, "Can college teaching be improved?" One paragraph in this article reads as follows:

> Would not a larger amount of supervision of college teaching be beneficial? Nowhere in our entire educational system is there so little supervision of actual classroom teaching as in our colleges. Difficult as is the problem of supervision, are we justified in assuming that college teaching is better without it? If it be undesirable or impossible to have systematic direct supervision, could not the indirect type of supervision be made more effective? Why allow rumors coming from a few students to give the rating for teaching ability? If the students are the ones to judge the teaching ability of their instructors, quite as truly as the instructors judge the learning ability of their students, why not recognize this principle and perfect its use? Why not, at regular intervals, ask all students to report on their teachers, stating their strong and their weak characteristics and making suggestions for improving the work? Such reports might be made directly to the president or dean and, if rightly used, could be more beneficial than harmful. It would, at any rate, be an interesting experiment.

The suggested experiment was tried in our faculty of the School of Education during the college year 1923–24. Before undertaking the task of finding out what our students thought about our teachers the whole matter was discussed frankly in one of our faculty meetings. Our professors agreed to undertake the experiment and a good attitude was developed from the very first.

Our work is on the quarter plan and the questionnaire was used three times during the college year, each time being given shortly before the close of the quarter. I visited in person each class, explaining to the students the purpose of the questionnaire, promising them that no one would see the material except myself and the instructor concerned. I also promised them that the questionnaire would not be examined until after all the final grades had been turned in to the college office, and consequently, their estimates of teaching ability would have no influence whatever upon final grades. These promises were kept faithfully. The questionnaire which was used follows:

Instructor .....

Class .....

Room ..... Hour ..... Days .....

QUESTIONNAIRE TO STUDENTS ON CLASSROOM TEACHING

In order to better, if possible, the instruction in the School of Education, I am asking your cooperation. Please be entirely honest. The material will be used in a confidential way, no one seeing it except the instructor concerned and the dean. Read each question and put a check in one of the columns which follow the question.

	Excellent	*Average*	*Poor*
(1) Does he begin and end classes on time?			
(2) Does he keep the air in the room as fresh as possible?			
(3) Does he prepare his work carefully?			
(4) Is he always kind and courteous?			
(5) Does he speak loudly and clearly enough?			
(6) Can you take good notes from his discussions?			
(7) What is your general estimate of his ability as a teacher?			

(8) What positive suggestions for improving the work do you offer?

The above statements express my honest judgment.

Signed: .....

Date .....

The results were mathematically computed by allowing 100 per cent. for "excellent," 60 per cent. for "average" and 20 per cent. for "poor." That is, the positions were rated as 5, 3 and 1. In this way an index number was worked out for each member of the staff. After this was done I had a private conference with

[1] Report of address by Dr. Herbert Patterson, dean of School of Education, Oklahoma A. & M. College, Stillwater, given at the sixth annual meeting of The Southern Association of Teacher Training Institutions, Nashville, Tennessee.

each professor and gave to him all the questionnaires for his permanent possession, suggesting that he study them carefully, regarding them as honest views of his students.

While criticism might easily be made of the exact form of the questionnaire and a question might be raised regarding whether or not the student should sign the statements, the results secured thus far appear to be valuable. Exact figures are not being made public at this time, since the experiment is being continued for a second year. Suffice it to say that according to the results of the questionnaires our teaching during the year did improve.

This type of supervision of college teaching attempts to be democratic, frank and much more scientific than no supervision at all or the occasional visit method. Inadequate as this method may be, it is at least an attempt to have some supervision over college teaching.

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EDUCATIONAL RESEARCH AND STATISTICS

SOME FACTS CONCERNING THE NEED OF FEDERAL AID IN SUPPORT OF PUBLIC EDUCATION

THE recent session of Congress adjourned without taking action to increase the amount of federal aid to public education. The Sterling-Reed Bill which was introduced got but little further on the way toward enactment than did the previous similar bills brought before former Congresses. Political parties have seemed more interested in electing a president in November than in furthering education, and the people at large have not been stirred out of the apathy of uneoncern into which a profound belief in the efficacy of our present educational program has apparently lulled them.

What is the significance of this passive attitude on the part of political leaders and on the part of the public generally toward the movement to increase federal support of education? It means one of two things—either the need for extensive federal aid does not exist or the existence of that need is not generally recognized. It is thinkable that either of these hypotheses may be correct. In case the former is true, all efforts to increase the amount of federal aid will probably prove fruitless. In case the need exists, that need will be satisfied only when the nation has been fully awakened to the fact of its existence.

In order to convince the people of the need of more extensive federal aid in support of education, it will be necessary to prove to their satisfaction three points relative to the educational situation. Those three points may be briefly stated as follows:

(1) Educational standards in certain states are at present inadequate to meet present-day needs.

(2) Under present methods of state support, it is impossible to improve to the point of adequacy the low standards which exist at present in certain states.

(3) Federal aid offers a feasible remedy for the correction of educational conditions which are irremediable under present methods of state support.

INADEQUACY OF EDUCATIONAL STANDARDS IN CERTAIN STATES

It is generally recognized that the educational opportunities offered in many of the southern states are inferior to the educational opportunities offered in other parts of the Union. The great numbers of illiterates make this evident. The inferior quality of educational facilities, as well as low teaching requirements and lax attendance laws, points in the same direction.

It is true that this evidence is of a comparative nature. Nevertheless, in view of the fact that educational standards are everywhere being improved, even where they are now relatively highest, it seems safe to assume that educational standards in parts of the south are considerably below the point of social adequacy. As a further support to this assumption, it may be pointed out that as a people we have come to consider literacy as a requisite to adequate preparation for citizenship. One hundred per cent. literacy among mentally normal citizens has become a national ideal, not as an end in itself, but as a means of fostering and advancing social and political ideals and institutions of a more fundamental character.

ADEQUATE EDUCATION DEPENDENT UPON ADEQUATE FINANCIAL SUPPORT

How, then, may adequate educational stand-

ards be achieved? Obviously the mere increase in expenditures of public money will not serve as an end in itself. Fine buildings and fine equipment can be bought for a price, and there is no doubt that these serve to increase, to some degree at least, the quality as well as the scope of education. But the quality of the education offered is more dependent upon the character of the instruction.

Can quality of instruction be bought? Certainly an increase in salary will not make a good teacher of a poor one. But in one respect, at least, instruction is not different from other commodities which may be bought and sold. It is subject to the laws of supply and demand. The better commodity goes to the higher bidder, while the poorer commodity is knocked down to the bidder who, through choice or through a lack of economic ability, offers a smaller price. Requirements for teaching are simply legal means of minimizing the chance of the public's buying a poor commodity. They are analogous to the guarantee which the buyer who is willing to pay for a good article demands with his purchase. The value of such a guarantee is charged against the buyer in the price of the article, and it can be demanded only by the buyer who is willing and able to pay for it.

When the requirements for teaching are raised, the supply is automatically curtailed, and the inducements to teach must be increased in order to supply the demand. What happens, then, when the tariff is taken off, so to speak—when the requirements for teaching are so low that the supply is great? The results in such a case are exactly those predicted by Gresham's law in regard to currency. The poor teacher drives out the good teacher, and the latter is forced either to seek some other occupation, or to seek teaching employment in some other place.

It is true, then, that educational standards are largely dependent upon adequate economic support, and within certain limits large amounts of public money spent efficiently for education are productive of better results than are smaller amounts similarly expended. With this economic factor in mind, let us consider the question of the ability of certain states to support adequate programs of education.

The Cost and Burden Incident to the Support of Education in 1920

The reason for extremely low educational unit-costs in the south is sometimes taken for granted, and it is sometimes said that the states of the south make little effort to provide adequate educational opportunities for their children. If "effort" can be measured in terms of unit-costs alone, then it can not be denied that the south makes little effort, for, of the southern group, only two states (Delaware and Oklahoma) spend as much as $30.00 per child of school age,[1] and all but six of the southern states spend less than $20.00 per child of school age for education.[2] Two southern states (Georgia and Mississippi) spent less than $10.00 per child of school age for education in 1920.

However, actual expenditures may be but little indicative of the burden of such expenditures. The following table will show that the states vary widely with respect to their financial abilities to support education.

It will be seen that the southern states have relatively small amounts of social income per child of school age. It will also be noted that the states of the south spend relatively small amounts per child for education. The apparently close relationship between the educational expenditures of states and their economic abilities, as measured in terms of social income, is further brought out in column three of the table, which gives for each of the groups of states the percentage of the social income devoted to public education in 1920.

A study of the table will reveal that the burden of educational support, as measured in terms of social income, was but little less in the south than in the northeastern states. The range of burden in the south, however, was much wider than in the northeastern states, which means that in certain states of the south the burden incident to the support of education in 1920 was greater than in any state in the northeastern group.

[1] "Child of school age" will be used in this paper to signify the child between five and eighteen years of age.

[2] "Education" and "public education" will be used to signify elementary and secondary education only.

TABLE I

COST AND BURDEN OF EDUCATION, BY GROUPS OF STATES, IN 1920

Groups of states	Cost of education per child of school age in 1920[3]		Social income per child of school age in 1920		Percentage of the social income spent for elementary and secondary education in 1920[4]		Percentage of the social income that it would have been necessary to devote to education in 1920 in order to spend $44.88 per child of school age	
	Median	Range	Median	Range	Median	Range	Median	Range
48 states of the Union	$44.88	$ 9.39 to $89.71	$2,228	$ 782 to $4,006	1.7%	.8% to 4.4	2.01%	1.1% to 5.7
Northeastern	$42.62	$32.63 to $53.23	$2,563	$2,087 to $3,897	1.5	1.2 to 1.8	1.7	1.1 to 2.1
North central	$55.60	$33.42 to $65.39	$2,500	$1,619 to $3,167	2.1	1.4 to 4.0	1.8	1.4 to 2.8
Southern	$16.00	$ 9.39 to $35.99	$1,400	$ 782 to $3,193	1.3	.8 to 2.0	3.2	1.4 to 5.7
Western	$70.71	$55.67 to $89.71	$2,475	$1,610 to $4,006	2.3	1.8 to 4.4	1.8	1.1 to 3.5

The wide differences among the states with respect to their abilities to support adequate education are further brought out by column four of the table. Using the median figures of column four of the table as a basis for calculation, we can see that the burden incident to equaling the 1920 median expenditure ($44.88) per child of school age would have been approximately twice as heavy in the south as it would have been in any other section. As a matter of fact not brought out by the table, the burden in certain individual states would have been greater still. To attain the median expenditure per child of school age in 1920, it would have cost Mississippi 5.7 per cent. of her social income. It would have cost Georgia 5.1 per cent.; Alabama, 4.5 per cent.; and Kentucky, 3.9 per cent.; though California could have spent an equal amount per child of school age at a sacrifice of 1.1 per cent. of her social income. The same expenditure on the part of Massachusetts would have deprived her collective citizenry of a little less than 1.2 per cent. of their combined incomes. Or, to put it in another way, Mississippi, Alabama and Georgia would have found it necessary to sacrifice considerably more of their social incomes than was actually sacrificed by Montana in 1920, although in that year Montana spent a little more than twice the amount of the median figure per child of school age.

Let us consider some extreme cases, again using some figures not supplied by the table. To equal the amount spent per child of school age by Montana in 1920, Mississippi would have needed to consume 12.3 per cent. of her social income for public education. To equal the same expenditure would have cost Georgia 10 per cent. of her social income. This expenditure cost Montana 4.4 per cent. of her social income in 1920. New York, California and

[3] By "child of school age" is meant a child between five and eighteen years of age.

[4] Income figures are taken from "Financial Statistics of the United States 1910–1920," by Mabel Newcomer, Macmillan Co.

TABLE II

THE RELATION OF EDUCATIONAL EXPENDITURES TO THE TOTAL OF ALL STATE AND LOCAL GOVERNMENTAL EXPENDITURES IN 1920

Groups of states	Percentage of the social income devoted to state and local governmental expenditures in 1920		Percentage of the total of all state and local governmental expenditures devoted to public education in 1920	
	Median	Range	Median	Range
48 states	6.3	3.2 to 12.5	27.8	16.0 to 45.0
Northeastern	6.1	4.6 to 7.0	26.7	17.1 to 36.9
North central	6.8	4.9 to 9.8	29.3	22.3 to 45.0
Southern	4.7	3.2 to 6.8	26.4	16.0 to 42.4
Western	8.2	6.9 to 12.5	32.0	18.6 to 42.4

Massachusetts could have spent equal amounts per child of school age by sacrificing less than 2.5 per cent. of their social incomes.

RELATION OF EDUCATIONAL EXPENDITURES TO TOTAL STATE AND LOCAL EXPENDITURES FOR ALL PUBLIC PURPOSES

Without discounting the value or the desirability of education, we must recognize the fact that education is but one of several demands upon the public purse. There are other duties which state and local governments must perform which consume considerable amounts of public funds. There must be courts, police and public officials; there must be roads; there must be provisions for public health and public safety. To promote education to the neglect of such fundamentally necessary functions would be foolhardy and would lead eventually to disaster.

Table II, which follows, gives for all the states and for the four groups of states certain figures relative to the burden incident to the support of state and local government in 1920. It is significant that the south approaches more closely to the other groups in column two than in column one. This fact seems to indicate that at least some of the states of the south are devoting relatively large proportions of their public expenditures to education. And such is indeed the case. With a few exceptions, the states of the south show a tendency to rank relatively higher with respect to the percentage of the public expenditures devoted to education than with respect to the percentage of the social income devoted to state and local government. Thus the table as a whole may be interpreted as showing state tendencies in the matter of public economy. And it will be seen that in states where education seems to be seriously neglected, there is no tendency to pile up other public expenditures, but rather the opposite tendency to devote a relatively high percentage of the relatively little money spent publicly to education.

THE RELATION OF STATE AND LOCAL GOVERNMENTAL EXPENDITURES TO THE SOCIAL INCOME

We have already seen (column one of Table II) the actual burden incident to state and local governmental expenditures in 1920. Column one of Table III gives for each group the burden which would have been borne if educational expenditures in each state had equaled $44.88 per child of school, and if other state and local governmental expenditures had remained exactly as they were in 1920. It will be seen that in column one the south ranks second only to the west, which means that in order to spend the 1920 median per child of school age, the south would have incurred a relatively heavy burden, even though other expenditures of government had remained unchanged.

Of course the figures of column one of Table III are purely theoretical. Certainly no state

TABLE III

THE RELATION OF STATE AND LOCAL GOVERNMENTAL EXPENDITURES TO SOCIAL INCOME IN 1920

Groups of states	Percentage of the social income which would have been consumed in support of state and local government if $44.88 had been spent per child of school age for education in 1920, and if other public expenditures had remained as in 1920		Percentage of the social income used for state and local government if $44.88 per child of school age had been spent for education, and if the ratio of educational expense to total state and local expense had remained the same as in 1920		Same as previous column, except that ratio of educational expense to total state and local expense in each state is made to equal the 1920 mean ratio (.283) of such expenditures for the entire United States	
	Median	Range	Median	Range	Median	Range
48 states	6.4	3.2 to 12.5	7.0	3.8 to 34.9	7.1	3.9 to 20.2
Northeastern	6.3	4.5 to 7.1	6.4	4.0 to 9.7	6.1	4.0 to 7.6
North central	6.6	4.3 to 8.9	7.2	3.8 to 8.9	6.3	4.9 to 9.7
Southern	6.9	4.6 to 10.1	13.0	6.7 to 34.9	11.3	4.9 to 20.2
Western	8.2	6.0 to 10.3	7.4	4.4 to 10.8	6.3	3.9 to 12.4

would be likely either greatly to increase or decrease educational expenditures without varying also the amounts spent upon other affairs of government. Whether other expenditures should vary in proportion to educational expenditures is, of course, a matter for doubt. Column two of Table III gives for each group of states the burden which would have been incurred in the support of state and local government, if the expenditures for education in all the states had equaled $44.88 per child of school age, and if other public expenditures had varied in proportion to educational expenditures.

However, it may well be that other public expenditures should not vary in proportion to educational expenditures. By using the figures supplied by the Educational Finance Inquiry Commission, and computing, we get a mean ratio of .283 for the entire United States for the year 1920. When we use this ratio, we get the results shown in column three of Table III.

The median for all the states in column three of Table III is 7.1. The range is from 3.9 per cent. in California to 20.2 per cent. in Mississippi. Only one southern state (Delaware) fails to exceed the median. Twelve states, eleven of which are typically southern, would be saddled with burdens involving the expenditure of more than 10 per cent. of their social incomes.

Just what percentage of the social income may safely be spent for public affairs it may not be possible to determine with precision. Certainly a larger percentage could be spent with safety in relatively wealthy states than in relatively poor states. In the Research Report[5] of the National Industrial Conference Board it is estimated that 75 per cent. of the social income is consumed by actual living expenses. It has been estimated[6] that about six billion dollars is needed annually for fresh capital investments in this country.

In 1920, federal expenditures alone represented roughly 9 per cent. of the total social income. This burden was distributed over the entire United States, though probably not in proportion to the social income by states.[7]

[5] Research Report No. 55. National Industrial Conference Board, 1922, The Century Company.

[6] Douglass, Paul and Dorothy, "What can a man afford," *American Economic Review*, December, 1921, Supplement No. 2, p. 34, ff.

[7] It is obviously impossible to determine where the actual burden incident to federal expenditures really falls. It appears to fall most heavily upon centers of capital and upon the ports of entry. Certainly the actual burden does not fall wholly upon the people of the states wherein federal taxes and revenues are collected, but upon the people everywhere who ultimately consume the goods, and upon the industries of the states wherein the taxed incomes are generated.

If we accept the above figures relative to living expenses and necessary capital investments, and if we act upon the supposition that it would be inadvisable to reduce the present standard of living, we will find that there remains approximately 16 per cent. of the social income available for public expenditures. Even if we ignore for the moment the burden due to federal expenditures, it will still be evident that the burden incident to equalling the median expenditure for education in 1920 would be wholly unbearable in many of the southern states. If we add to this the further burden incident to federal expenditures, it becomes only more apparent that practically every southern state would need to make inroads upon its much needed capital, or else reduce the already relatively low living standards of its people.

THE OPPORTUNITY OF THE FEDERAL GOVERNMENT

A detailed plan whereby each state might be compelled to bear its fair share of the burden of the support of public education, and at the same time receive sufficient federal aid to insure adequate provision for education, does not belong to this paper. Certainly the aim of such a plan should be to collect the money for educational purposes where the wealth is, and to distribute it where it is most needed for educational purposes. Such a plan should involve the rendering of federal aid not only with respect to the educational needs of a given state, but also with respect to the ability of the given state to take care of its own educational needs.

AN ESTIMATE OF THE AMOUNT OF FEDERAL AID NEEDED

In attempting to estimate the amount of federal aid necessary to make possible adequate standards of education in every state, we can hope only to produce a figure which will roughly approximate the true one. If we assume the minimum adequate educational expenditure to be the 1920 median expenditure per child of school age ($44.88), and if we assume the maximum desirable burden for educational purposes to be the median burden of all the states (2.01 per cent. of the social income) if they had, in 1920, spent exactly $44.88 per child of school age, we will have sufficient bases for computing an estimate. That estimate will be equal to the amount the federal government would have needed to contribute to public education in 1920, if every state had spent $44.88 per child of school age for education, and if no state had consumed more than 2.01 per cent. of its social income for educational support. According to this estimate, 24 states would share in a total federal contribution of over two hundred thirty-four million dollars.

THE ECONOMIC BURDEN INCIDENT TO PROVIDING THE NECESSARY FEDERAL AID

Federal aid to the amount of $234,000,000 would necessitate an additional tax of four tenths of one per cent. upon the national social income. For the state of Georgia to perform for the children of Georgia what its share in this amount of federal aid would accomplish, it would be necessary for that state to consume 3.06 per cent. of her social income in addition to what was spent in 1920. What is true of Georgia is no less true of many of the states of the south. For those states, adequate provision for education is economically impossible; for the nation as a whole, it is not only possible but feasible as well. The educational opportunities of the young American in the south can be multiplied from one to five times at an annual cost of four tenths of one per cent. of the national social income.

CONCLUSIONS

In view of the facts in the case, it seems reasonable to conclude:

(1) That educational standards in certain states are at present inadequate to meet present-day needs.

(2) That under present methods of state support, it is impossible to improve to the point of adequacy the low standards existing at present in certain states.

(3) That federal aid offers a feasible remedy for the correction of educational conditions which are irremediable under present methods of state support.

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